



Water Study



July 16, 2019

To City of Scottsdale Water Resources Department

Copy to: Joe Phillips – City of Scottsdale CPM

From Bill Roberts

Tel 602-216-7208

Subject Site 42 2.5 Million Gallon Reservoir Project
Final Basis for Design Report for Water

Job no. 11180254

**FINAL Basis of Design
Report**

☒ **APPROVED**

☐ **APPROVED AS NOTED**

☐ **REVISE AND RESUBMIT**



Disclaimer: If approved, the approval is granted under the condition that the final construction documents submitted for city review will match the information herein. Any subsequent changes in the water or sewer design that materially impact design criteria or standards will require re-analysis, re-submittal, and approval of a revised basis of design report prior to the plan review submission.; this approval is not a guarantee of construction document acceptance. For questions or clarifications contact the Water Resources Planning and Engineering Department at 480-312-5685.

BY rrahman

DATE 8/26/2019

1 Introduction

This memorandum will serve as the Final Basis for Design Report for Water for the Site 42 Conditional Use Permit submittal. This document summarizes the existing improvements at the Site 42 facility and describes why a new 2.5 million gallon (MG) water storage reservoir is being added to the facility.

2 Project Background

Site 42 is a potable water facility that is owned and operated by the City of Scottsdale. It provides water service to the City's Northern Water Service Region. Its reservoirs float on one pressure zone within the City's distribution system and its two booster pump stations (BPS) discharge into two other pressure zones. The facility also includes three commercial water fill stations and one residential water fill station. Water trailers and 3,000-6,000 gallon water trucks purchase water at these stations for other water companies and private residents. The existing facility includes the following major components:

- 1.0 MG Above Grade Steel Storage Reservoir
- 2.5 MG Above Grade Steel Storage Reservoir
- BPS 42B, Firm Capacity 7,750 gpm
- BPS 42D/E, Firm Capacity 21,500 gpm
- Commercial and Residential Water Fill Stations
- City and Private Communications Facilities
- City Fuel Station
- Fire Station (no longer in use)
- Material and Equipment Storage

3 Proposed Improvements

The City's Water Resources Department expects water demands within the area to increase due to planned development in north Scottsdale. The need for more water storage at this facility is discussed in the 2017 City of Scottsdale Infrastructure and Improvement Plan (IIP). In addition, current water demands are high enough that City staff cannot take the existing 2.5 MG reservoir out of service for inspections or service. An assessment of the existing reservoir in 2018 recommended its full rehabilitation. This project proposes to install a new 2.5 MG potable reservoir to support the increasing demands and to increase the facility's redundancy. The proposed reservoir is illustrated on the site plans submitted with the Conditional Use Permit Application.